



THEATER AIRLIFT LIAISON OFFICER

COMMAND AND CONTROL

GRADUATE RESEARCH PROJECT

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GRADUATE RESEARCH PAPER

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Abstract

This paper addresses the following questions: First, can substantive standards be created for Theater Airlift Liaison Officers (TALO)? Second, can the command and control (C2) structure be improved so that TALO can better support Army units?

These questions are explored through a review of classical organizational theory and Air Force organizational doctrine. This review highlights the importance of unity of command, technical efficiency, and span of control (including difference of function, time, and space) as critical factors in organizational development. Next, Air Force airlift units that liaise with the Army and work with the TALO, such as the Tactical Air Control Party (TACP), Tanker Airlift Control Element (TALCE) Tanker Airlift Control Center (TACC), Air Mobility Operations Control Center (AMOCC), Air Mobility Division (AMD), and Director of Mobility Forces (DIRMOBFOR), are analyzed in relation to their potential to provide TALO C2. This is done through a qualitative review of doctrine, regulations, and past TALO operations.

After analysis, the findings conclude that the TACP provides an adequate C2 structure for the TALO, but the AMD Director, and possibly the DIRMOBFOR, would provide a better structure. AMD operational control of TALO would result in better support for the Army.

THEATER AIRLIFT LIAISON OFFICER

COMMAND AND CONTROL

I. Introduction

In a world of increasing joint and combined U.S. operations, the importance of service liaisons continues to grow. These liaisons are specialists in their field with a mission of ensuring the best use of their represented services' assets. As such, Theater Airlift Liaison Officers (TALO) are the Air Force (AF) airlift specialist responsible for advising and assisting Army units in the use of AF airlift. They work airlift issues from unit deployment to drop zone operations. In a deployed environment, TALO report to the Senior Air Liaison Officer (ALO), the AF Close Air Support (CAS) specialist. These specialists are experts integrating AF and Army operations in their separate fields, yet each has only a rough understanding of the other's field. They are, in every respect, specialists. As an airlift specialist, TALO would be out of their element if asked to design, explain, and control joint CAS operations; likewise, ALO would be unable to adequately design, explain, and control joint airdrop operations.

TALO hold a position that at times seems forgotten by the Air Force. To start, there is almost no research or review into the TALO field. This is evident as one tries in vain to research the field of the TALO. The most recent published research directly covering the TALO was an Air Command and Staff College (ACSC) paper entitled "Handbook for Tactical Airlift Liaison Officers," also known as... "The TALO: MAC's Man in the Army," published in 1985 (Miller, 1985). Second, Air Force regulations give TALO only a cursory overview as all of their procedures, operations, policies, and

regulations are covered in a brief eight-page Air Force Instruction (AFI). Third, TALO force package (a.k.a. UTC, the Unit Type Code identifier for equipment and personnel that deploy for operations) does not include any mission support equipment. Fourth, until recently, TALO manning slots have frequently been left unfilled – leaving gaps in TALO support to Army posts that have lasted for months or even years (Laiuppa, 1997).

Despite these difficulties, anecdotal evidence suggests senior airlift officers and the Army view TALO as highly valuable resources for unit deployment and redeployment, force employment and sustainment, and general airlift knowledge.

This dichotomy is now being met. In the last few years, TALO training has greatly improved, and more improvements are forthcoming. Also, to counter the trouble that exists in TALO manning, Air Force Personnel Center is now immediately filling vacancies as they occur (Boquist, 2002).

Along with these changes, other changes could be instituted that would improve TALO effectiveness. This paper explores two possible avenues of research: 1) provide a discussion and clarification of major portions of the TALO operational mission, and 2) recommend a more effective chain of command to enhance the effectiveness of TALO operations. Recognizing the role of an AF specialist and the requirements of an effective command and control structure approaches these avenues. In particular, this paper is a review of doctrine, regulations, and past operations written to explore the TALO command and control structures in an effort to provide more effective airlift support for Army commanders. It should also be noted that this paper focuses on OL TALO, but applies to both Unit and Operating Location (OL) TALO.

Airlift Liaison Officers

With the AF Rapid Global Mobility vision and the Army Objective Force vision (developing the ability to provide a combat capable brigade anywhere in the world in 96 hours, a division on the ground in 120 hours, etc.) it is accepted that future military operations will be increasingly joint and will rely more upon AF airlift (Army, 2001). A small number of AF elements exist whose primary purpose is to liaise with non-AF units to ensure that these concepts can be achieved and not merely remain slogans. These offices include the Director of Mobility Forces (DIRMOBFOR), the Air Mobility Division (AMD), the TALO, and to lesser extents the Tanker Airlift Control Element (TALCE), and the Tactical Air Control Party (TACP) (AFDD 2-6, 1999). Each of these will be discussed in detail through out this paper but, as a framework, an introduction to the primary focus of this paper, the TALO, is necessary.

“Theater Airlift Liaison Officers (TALO) are USAF liaison officers specially trained to implement the theater air control system (TACS). They advise their assigned Army unit commander on the optimum, safe use of strategic and theater airlift assets. TALOs are highly qualified, rated airlift officers, with airdrop experience preferred, assigned duties with TACPs supporting US Army units” (AMCI 13-101, 1996). In a deployed combat environment, this support could include answering Army staff questions about airlift capabilities, coordinating airlift requests, providing in transit visibility (ITV) on airlifted assets, and conducting drop zone (DZ) operations. TALO are expected to have a full understanding of contingency airlift operations, be fully equipped to carry out their mission, and work closely with supported Army unit commanders and staff on all airlift matters.

Training, Experience, and Qualification

As stated earlier, TALO are “specially trained” to execute their duties. This training can be obtained from three methods: past training and experience, initial training, and continuation training. Continuation training can be formal training or garnered through proper mentoring, which includes the chain of command. This assumes a chain of command that is both accessible to TALO and knowledgeable about and experienced in the TALO mission.

Regarding experience, TALO are referred to as a rated airlift officers with airdrop experience. Yet, systems such as Pacer CRAG (Compass, Radar, and Global Positioning System) reduce operational tanker navigator billets resulting in an over abundance of navigators, while airlift pilots (a position that historically filled TALO billets) are in short supply. This contributes to tanker navigators being assigned TALO duties. Tanker aircraft perform a limited airlift mission and no airdrop mission. As a result, TALO with a tanker background have limited intra- and intertheater airlift experience and no airdrop experience. Note this does not imply that tanker navigators are unfit for TALO duties. Rather, this highlights that tankers crewmembers start their careers at a disadvantage and have a greater reliance on initial TALO training and continuation training.

As for initial TALO training, this occurs in the Air Liaison Officers Qualifying Course (ALOQC), formally known as Joint Firepower Control Course (JFCC). Information provided in this two-week course includes topics such as joint airpower doctrine and Army operations and structure. Unfortunately, ALOQC is not designed for airlift or TALO operations; it is designed for AF members who support the Army by

providing Close Air Support (CAS). TALO complete their initial training in TALO Contingency Training Course (TCTC), which follows ALOQC (AMCI 13-101, 1996). Prior to 1991, TCTC was a five-day course taught by the Combat Control Team (CCT). From 1991 to 1999, it became a five-page handout discussing theater and strategic airlift support to the sister services combined with a brief talk from a former rated airlift crewmember (Laiuppa, 2002). This brief training was also combined with a field exercise covering drop zone surveys and operations. However, this exercise was sometimes cancelled (not postponed) for weather, lack of airlift support, or conflicts with the JFCC priority mission of CAS training. TCTC training reached such a level that a 1997 TALO survey revealed that TALO viewed TCTC as being extremely important (rating a 5.7 of 6.0) yet very poorly conducted (rating a 3.4 of 6.0) (Laiuppa, 1997).

Recognizing this lack of training, AMC (led by a corps of experienced TALO) expanded the curriculum of TCTC to better prepare inbound TALO. TCTC is now a three to five day course which includes topics on Army operations and structure, AF operations and structure, garrison duties, contingency/deployment operations, contingency/theater operations, information systems, assault zone operations, and field craft (Turley, 2002). Plans are underway to further expand this training and create a TALO pipeline program. Training would initiate with ALOQC, continue with TCTC, and then follow with a training program conducted within an Air Mobility Operations Group (AMOG). This is anticipated to give TALO a greater understanding of airlift command and control (C2), deployment operations, and theater airlift operations (Turley, 2002).

Once initial training is completed, TALO report to an Army post as the sole air mobility representative to a division or corps, and often the sole air mobility representative to an entire post. From here, they make monthly to quarterly forays to fly with an AF unit. Otherwise, this starts the second part of TALO training, continuation training. For TALO, continuation training is informal training that consists of limited currency events such as: deploy with their Army unit for unit training and exercises, conduct semiannual drop zone operations, and (if required) maintain jump status (AMCI 13-101, 1996). Since TALO are often the sole airlift expert on an Army post, these events are conducted in an unsupervised environment. There is currently no standardization evaluation function within the TALO field; in fact, there are no defined standards at all. Therefore, it is very difficult for TALO to know if they are performing their duties well. Also, most of these currency events cover a specific skill (such as airborne training), but do little to add to, or enforce, general knowledge of TALO operations. No other formal training is mandated or provided to supplement and enforce initial training.

The other part of continuation training is mentoring. Since TALO are frequently the only airlifter (i.e. airlift expert) present on a post, mentorship from fellow TALO is difficult. A critical form of mentoring is derived by the guidance and airlift experience within their chain of command. While in garrison, TALO may receive some quality mentorship, but with the isolation noted above – it is difficult. While deployed, TALO report to the Senior Air Liaison Officer (ALO), are assigned duties by the Senior ALO, and are deployed under operational control (OPCON) to the TACP (AMCI 13-101, 1996). The Senior ALO, typically the TACP commander, is a rated officer responsible

for advising the unit commander on the optimum, safe and efficient use of AF CAS assets. These officers are expert combat crewmembers, but they receive virtually no formal training on AF airlift. Hence, they are novices regarding AF inter- and intratheater airlift systems. As a result, their ability to mentor and provide guidance on airlift or general TALO operations is quite limited.

Problem Statement

Research and guidance into the Theater Airlift Liaison Officer mission is virtually nonexistent. The TALO mission requires that TALO be highly fluent in and adept at working within all aspects of the AF airlift system. Current TALO ranks are populated with officers who have limited airlift background and exist in an undependable continuation training system. Exacerbating this problem is that the deployed TALO C2 structure does not have the airlift expertise necessary to compensate for these deficiencies and provide proper TALO guidance. This paper will address the following questions: First, can substantive standards be created for TALO? Second, can the command and control structure be improved so that TALO can more effectively and efficiently support Army units?

Objective

The objective of this paper is to highlight the mission of airlift liaison to the Army. It focuses on the current state of affairs of the TALO regarding air mobility liaison C2. It 1) reviews organizational theory and AF organizational doctrine, 2) defines elements that liaise with the Army regarding airlift operations, and 3) emphasizes the

TALO need to be incorporated in an airlift-centered C2 structure. As there is little to no literature covering airlift liaison, this paper also aims to shed light on the absence of literature and doctrine on the TALO – and the services they provide – and tries to improve such operations by exploring this valuable commodity.

II. Organizational Literature Review

Before any reasonable discussion of the TALO chain of command can be conducted, an investigation on the theory and doctrine of organizations, and in particular AF organizations, is necessary.

Relatively small organizations usually need only simple operations to achieve their goals. Organization is simpler, communication is more direct, specialization is less necessary, and so employees better understand the mission. In large organizations, like the U.S. military, all of this cannot be assumed, which makes the efficient and effective organization of forces critical. Even though the mission may be to “win the war,” each unit looks at different ways to achieve victory. A comptroller squadron may focus on efficiency and cost where an operational flying squadron will focus more on the effectiveness of operations. Without proper organization, these units can find themselves at odds with each other.

Finally, AF specialization, by necessity, is such that each job is a specialty within a specialty. Each job within the AF does not automatically understand the intricacies of all others, even if the two jobs are within the same Major Command (MAJCOM) and share a similar Air Force Specialty Code (AFSC). This requires greater coordination and

effort when combining operations. A ready example can be made with AF pilots. It takes a pilot about four-months of initial training followed by 6-12 months of flying to be fully mission ready when crossflowing (i.e. changing specialization) from a KC-135 to a C-17. Even then, the pilot is considered new and must fly an additional 1-2 years before being considered “experienced.” This example is for two planes within the same MAJCOM. To crossflow between planes in different MAJCOM is considerably more difficult.

Organizational Theory

Organizational theory has to do with coordinating the efforts of people to conduct business and accomplish a mission. Organization becomes more critical as tasks and missions become more complex and the numbers of people and variance of their specialties grow. This paper turns to classical organization theorists (e.g. Henri Fayol, Fredrick Wilson Taylor, Max Weber, and Luther Gulick) in an attempt to improve AF airlift liaison organization.

Why is specialization within the AF necessary? “Because men differ in nature, capacity and skill, and gain greatly in dexterity by specialization; Because the same man cannot be at two places at the same time; Because the range of knowledge and skill is so great that a man cannot within his life-span know more than a small fraction of it. In other words, it is a question of human nature, time and space” (Gulick, 1937). The AF is made up of over 350,000 people in over 60 career fields that can be further subdivided into hundreds of specialties. It is obviously impossible for any one person to amass the knowledge necessary to reach any degree of specialization in each career field.

For example, the C-130H is an AF cargo aircraft that has a basic crew of five: a pilot, copilot, navigator, engineer, and loadmaster. To receive the most basic of qualification in each crew position requires considerable training and experience. For a copilot and navigator, this would be about one year of undergraduate flight training plus four months to specialize in the C-130. For the pilot, this would be 16 months to become a copilot plus about 2-2 1/2 years of experience and training. Likewise, the engineer and loadmaster each require up to a year of total training. Just to fly a C-130 requires accumulated training and experience of over 7-8 years. Given the enormous cost and time associated with training a single crewmember in every specialty, the advantages of crew specialization are somewhat self-evident. Extend this same logic to the entirety of the AF and it is clear that specialization is necessary. However, with the vast size of the AF and the intricate specializations come complexity and the need for organization.

Yet, there is more than just a need for organization. “There must be a place appointed for each thing and each thing must be in its appointed place. Is that enough? Is it not also necessary that the place shall have been well chosen?” (Fayol, 1916) It is not enough for an organization to simply exist. Each person and object within the organization needs to be placed to meet the goals and objectives of that particular section. If that is not met, the organization will merely have the appearance of function but, in truth, lies vulnerable to disorder.

Care must be taken in building an effective organization. Luther Gulick provides an outline to define the problem:

- I. First Step: Define the job to be done.
- II. Second Step: Provide a director to see that the objective is realized.

- III. Third Step: Determine the nature and number of individualized and specialized work units into which the job will have to be divided.
- IV. Fourth Step: Establish and perfect the structure of authority between the director and the ultimate work subdivision (Gulick, 1937).

I. For the first step, the job that is being dissected is providing an effective AF airlift liaison to operational Army units during contingency operations. Chapter I provided a quick introduction to the problem. It will be discussed in greater depth in subsequent discussions.

II. The second step is one of the goals of this paper. Providing a director is not merely choosing someone to place as an authority in the chain of command. Providing a director involves understanding unity of command, technical efficiency, and span of control (Gulick, 1937).

The first consideration in providing a director is unity of command. “For any action whatsoever, an employee should receive orders from one superior only” (Fayol, 1916). “Unity of command ensures the concentration of effort for every objective under one responsible commander” (AFDD 1, 1997). When more than one commander gives orders, they often conflict in intent or priority. The result is confusion, low morale, and mission detriment (Fayol, 1916).

The second consideration is technical efficiency and, in particular, homogeneity. This is also known as singleness of purpose. “The efficiency of a group working together is directly related to the homogeneity of the work they are performing, of the processes they are utilizing, and of the purposes which actuate them. From top to bottom, the group must be unified. It must work together” (Gulick, 1937).

In simplistic terms the third consideration, span of control, determines the number of subordinates a supervisor can oversee. More than that, it determines how effectively one can oversee subordinates. It stands to reason that for a supervisor to have an effective span of control over a large number of subordinates, he or she must have ideal environmental elements to permit that success.

These environmental elements can be divided into three categories: difference of function, time, and space (Gulick, 1937). Difference of function refers to the similarity in vocation amongst subordinates. It is easier for a commander to oversee a group of current operators more effectively than supervising the same number of personnel in a support unit consisting of current operations along with aerial port, command post, administration, etc. The element of time refers to the stability of the organization. It is easier to effectively supervise a stable organization than to supervise a new or changing organization. Finally, The element of space refers to the location of the supervisor and the subordinates. It is easier to effectively supervise a group of collocated personnel than a scattered group.

Note that where span of control referred to the homogeneity of the subordinates, singleness of purpose refers to homogeneity of the supervisor, subordinates, and mission they perform. From this, Gulick makes two notes: (1) “work divisions that are non-homogenous in work, in technology, or in purpose will encounter the danger of friction and inefficiency; and (2) that a unit based on a given specialization cannot be given technical direction by a layman” (Gulick, 1937).

III. The third step of building an effective organization is the working portion of organization building. This includes understanding the mission and properly dividing the

tasks amongst individuals. A division of the different missions and tasks involved in TALO operations will be conducted in a subsequent discussion. This will include the TALO and offices that are involved with portions of the TALO mission.

Note that specialization, and the need for specialization, has been discussed earlier. An important note is that leadership, planning, and coordination are also specializations. How the Department of Defense has divided these duties and responsibilities for air support operations amongst different entities, and these particular duties and responsibilities, will be discussed in Chapter IIA of this paper.

IV. The fourth step is the central concern of organizational theory. It ties together the preceding three steps to create an effective and efficient organization. “It is the function of this organization (IV) to enable the director (II) to co-ordinate and energize all of the subdivisions of work (III) so that the major objective (I) may be achieved” (Gulick, 1937). This is a dynamic process that continuously strives to place the right people in the right places to get the right job done. It is here that we review the second step, provide a director, to ensure the best possible director is chosen.

Air Force Organization

“Understanding Air Force organizational terms and structures is critical because war is waged and airpower employed through and by organizations” (AFDD 1, 1997). This section of the paper is a brief outline of AF doctrine regarding organization. It briefly describes general concepts used to organize AF units. AF Doctrine Documents 1 and 2 together provide an in-depth view to AF organization.

“Two central ideas – the principle of unity of command and the tenet of centralized control and decentralized execution – underpin the way the AF organizes” (AFDD 2, 2000). The following is a brief discussion of these two ideas and some of the principles and tenets related to them. Following that is a discussion of command relationships.

First, unity of command extends the principles taught by Fayol and Gulick. Unity of command requires a singleness of purpose that drives an organization toward a common objective. It requires that all like forces be placed under one, and only one, command. To be effective in the drive toward a common objective, each element of this single command chain needs to be fully versed in the mission. A commander must understand the mission of each subordinate to guide his or her efforts. This is summarized in the phrase that airpower can only be effectively operated under the centralized command of an airman (AFDD 1, 1997). Taking this one step further, each aspect of airpower requires the experience and expertise of that specialty to guide it. Senior mechanics share common objectives with mechanics, senior fighters share common objectives with the fighter forces, and senior airlifters (i.e. airlift professionals) share common objectives with the airlift force. To incorporate unity of command of airpower under a single airman, the chain of command follows this line as far as possible.

Along with unity of command, a guiding principle for organization is that of objective. “The principle of objective is concerned with directing military operations toward a defined and attainable objective that contributes to strategic, operational, or tactical aims. In application, this principle refers to unity of effort” (AFDD 1, 1997). To set a defined and attainable objective requires an enlightened command that understands

each aspect of its realm from capabilities, to user needs, to each commander's objectives. To execute airlift for an operation such as Enduring Freedom, each level of commander needs to know what capabilities are available (i.e. how many planes, what kind of planes, where are they stationed, etc.), what type of airlift is needed (i.e. airdrop of food to refugees, airland of ammunition to Army special forces, air evacuation of prisoners to detaining facilities, etc.), and what are the commander's objectives (i.e. the President's "war on terrorism," the Joint Force Commander's (JFC) priority to establish air superiority first then attack Al Qaeda and Taliban forces, etc.). With this knowledge, "the principle of the objective shapes priorities to allow air and space forces to concentrate on theater or campaign priorities and seeks to avoid the siphoning of force elements to fragmented objectives" (AFDD 1, 1997).

A third guiding principle is that of simplicity. Simplicity directs the Air Force to "avoid unnecessary complexity in organizing, preparing, planning, and conducting military operations... Straightforward plans and unambiguous organizational and command relationships are central to reducing (complexity)" (AFDD 1, 1997). This principle derives in part from the span of control. An organization that is simple with regard to function, time, and space allows for a more effective command of more subordinates.

Centralized control and decentralized execution is the guiding tenet and one of the two central ideas that underpin the way the AF organizes. "The Air Force organizes within "the principle" and tenet of centralized control and decentralized execution" (AFDD 1, 1997). Unity of command establishes a single commander. This commander

executes his or her authority under centralized control. Individual agencies execute their mission under decentralized execution.

The Air Operations Center (AOC) is the heart of centralized control for the AF within a theater of operations. The AOC establishes and controls the strategy, plans, and operations for the theater air war. Almost all AF units outside the AOC work directly with the center to receive the direction necessary for decentralized mission execution. This process requires information flow between and within all levels of operations to make informed decisions.

The last part of this chapter defines command relationships. “Clear and effective command relationships are central to effective operations and organizations” (AFDD 1, 1997). There are four basic forms of command relationships and a related authority, administrative control (ADCON), which are summarized below:

- Combatant command (COCOM)
- Operational control (OPCON)
- Tactical control (TACON)
- Support (AFDD 1, 1997)

First, Combatant Command (COCOM) is the ultimate warfighting authority exercised by commanders of unified or specified combatant commands. It is non-transferable and gives authority over all aspects of operations, training, and logistics to accomplish assigned missions.

Second, Operational Control (OPCON) is the command authority immediately subordinate to COCOM. It allows the commander to organize and employ forces to accomplish assigned missions. OPCON may be delegated.

Third, Tactical Control (TACON) is the command authority immediately subordinate to OPCON. It is local control that a commander exercises for the direction and control of forces to accomplish assigned missions. TACON may be delegated.

Finally, support establishes priorities, provides capabilities, and combines efforts of similar assets. A supported commander has authority to direct the mission or objective, but not to position forces.

As a side note, Administrative Control (ADCON) is an administrative and support authority, not a warfighting nor a command authority.

IIA. Operational Doctrine Review

In April 1992, Air Force Chief of Staff General Merrill McPeak initiated major infrastructure reorganization over the theater airlift C2 structure (Carter, 2000). A decade later, confusion still exists as to the structure and role of each participant. This section briefly describes a number of organizations in the airlift liaison structure and gives a brief description of each mission.

Figure 1 from AFDD 2 is provided below, but care must be taken when using this as a reference. For starters, as directed by Secretary of Defense Rumsfeld, the NCA is currently referred to as the President of the United States and Secretary of Defense. Operationally, Figure 1 implies that the Joint Forces Air Component Commander (JFACC), exercises OPCON of the Director of Mobility Forces (DIRMOBFOR), who in turn exercises OPCON/TACON of the Joint Air Operations center and other units. The JFACC does have OPCON of the DIRMOBFOR, but the DIRMOBFOR does not have

command over any forces (unless delegated). The function of the DIRMOBFOR is as a director (AFDD 2, 2000). This will be discussed in greater detail.

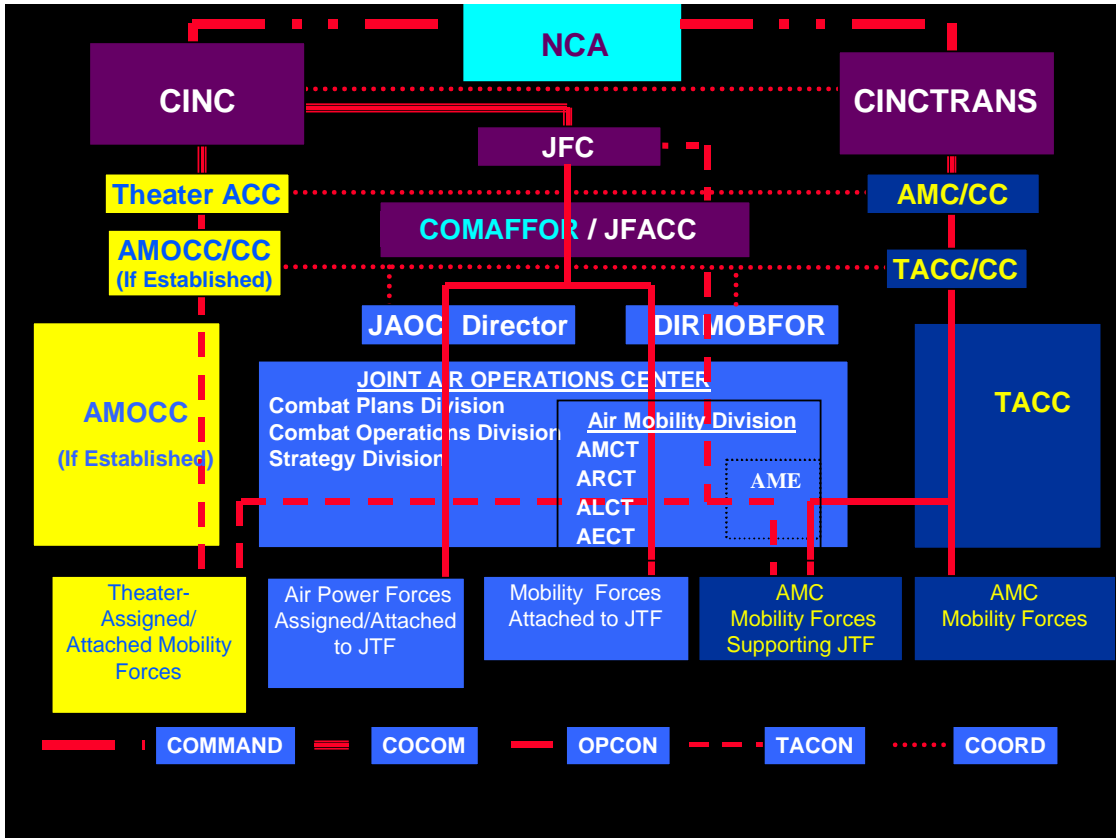


Figure 1. Command Relationship for Air Mobility Forces (AFDD 2, 2000)

Theater Airlift Liaison Officer

The concept of the TALO started in the early 1950s as an airlift liaison officer who handled daily airlift requests and made sure that materiel was ready for air movement. By the late 1960s the Tactical Airlift Liaison Officer was a member of the TACP within Tactical Air Command (TAC). However, in 1974 when Military Airlift Command (MAC) became the single source manager of airlift, the C-130 and Tactical

Airlift Liaison Officer transferred from TAC to MAC (Williams, 1999). Since then, the C-130 has been under control of Air Combat Command (ACC) and now Air Mobility Command (AMC); the C2 and mission of the TALO has been equally dynamic.

In garrison or deployed, TALO regulations are governed by AMC/DOOM, office in charge of mobile command and control (AMCI 13-101, 1996). CONUS OL TALO, in garrison, report to either the 615 AMOG or the 621 AMOG as members of AMC.

Overseas TALO, in garrison, report to the Air Support Operations Squadrons or Groups (i.e. the supporting TACP) as members of PACAF or USAFE. While deployed, TALO are airlift liaisons to the Army and represent the AMD and the DIRMBOFOR. Yet, deployed TALO are OPCON to the TACP, a CAS-oriented support unit, report to the Senior ALO, and work where directed by the Senior ALO.

Deployed, the Army relies on the TALO as the airlift liaison whose primary missions include:

- Advise and assist on matters consisting of intra- and intertheater AF airlift.
- Coordinate planned, immediate, and emergency airlift requests with AF and Army elements.
- Conduct Drop Zone (DZ) operations from DZ selection, to DZ survey, to DZ control.
- Assist with matters consisting of the air deployment and redeployment of the supported Army unit (AMCI 13-101, 1996).

Along with maintaining close ties with the supported Army unit, to accomplish their mission, TALO maintain liaisons with a number of AF units. These units include;

the AMD, for direct airlift C2 coordination; their TACP, for physical support; and other supporting TALO, to coordinate unit operations.

Tactical Air Control Party

The Tactical Air Control Party (TACP) is an ACC based unit with a stated mission to “advise and assist the ground commander in planning, requesting, and coordinating CAS” (JP 3-09.3, 1995). Though TACP overseas belong to PACAF or USAFE, their ACC-like mission of CAS remains the same. TACP also strive to be “the principal Air Force C2 liaison element aligned with Army maneuver units from battalion through corps” (AFTTP 3-1 V26, 2000).

TACP are focused on providing their supported Army units’ specialists in the operational art of CAS. These specialists consist of ALO and Enlisted Terminal Attack Controllers (ETAC). Rated officers from fighter/attack weapon systems serve the duty of ALO as an “ALFA tour,” that is, their stint as an ALO is a one-time assignment lasting two to three years that takes them away from their specialty of flying fighter aircraft. On the other hand, ETAC generally devote their entire careers as CAS controllers. The most formal training either group receives on TALO or air mobility operations is the same brief overview that, from 1991 to 1999, was the only formal training TALO received.

Along with CAS controllers, TACP have a weather detachment and the TALO; with the TALO as the sole provider of airlift expertise. While deployed, TACP, when considered separate from the TALO, have primary missions that include:

- Advise and assist its supported unit on matters consisting of fighter and attack aircraft mission planning and execution.

- Coordinate planned, immediate, and emergency CAS requests with AF and Army elements.
- Provide the primary terminal attack control of CAS in support of ground forces (AFTTP 3-1 V26, 2000).

Deployed TACP are OPCON to the Air Support Operations Center (ASOC) and report to the ASOC Director. In turn, ASOC are aligned at the Corps level and are directly subordinate to the AOC (AFDD 2-1, 2000).

In addition to oversight of TACP and the mission they accomplish, the ASOC has primary missions that include:

- Advise and assist its supported unit on matters consisting of CAS employment and CAS and Suppression of Enemy Air Defense (SEAD) target nominations.
- Provides targeting and friendly force location information to AF and other units (AFTTP 3-1 V26, 2000).

It is important to note that there are no TALO or AF airlift experts directly attached to the ASOC. (However, with TALO OPCON to the TACP, it has been recommended that corps TALO spend time in the ASOC (Laiuppa, 2002).)

Tanker Airlift Control Element

The Tanker Airlift Control Element (TALCE) is an air mobility support unit that evolved from the Airlift Control Element (ALCE) as part of air mobility decentralized execution. The primary mission of the TALCE is to provide “continuous on-site management of mobility airfield operations” (AFDD 2-6, 1999). Generally, this is command and control of AF airlift assets.

TALCE vary in size from a few people organized as a Mission Support Team (MST) to a few hundred people. Generally, they are manned and equipped for short-term operations. The primary missions of TALCE include:

- Proved mobile command, control, and communications capabilities.
- Oversee airfield operations to include aerial port, logistics, maintenance, security, weather, medical, and intelligence services.
- Conduct airfield surveys (AFDD 2-6, 1999).

CONUS based TALCE are considered the forward arm of the TACC. When deployed, they remain OPCON to TACC and generally do not change operational control (CHOP) to the theater. Europe and Pacific based TALCE are considered the forward arm of their respective Air Mobility Operations Control Center (AMOCC). In either event, TALCE maintain close ties with the theater DIRMOBFOR and the AMD/Air Mobility Element (AME) for theater operations.

Air Mobility Division

During the Vietnam conflict, theater air was centrally controlled by the Tactical Air Control Center (TACC). This unit was the centralized control center for air operations, but focused primarily on the control of fighter aircraft. As the demands of the airlift missions grew, the Airlift Control Center (ALCC) was created to provide centralized control, and the ALCE was created for decentralized execution (Rennie, 1991). The TACC, ALCC, and ALCE, have since evolved into the AOC, AMD, and TALCE respectively.

The Joint AOC (JAOC) is the centralized control for theater air operations. It is designed as “the aerospace operations planning and execution focal point for the JTF and is where centralized planning, direction, control, and coordination of aerospace operations occur for which the COMAFFOR/JFACC has OPCON/TACON” (AFDD 2, 2000). The JAOC is a flexible unit that can be tailored to meet mission needs from humanitarian operations to combat operations. Typically, it is composed of the four core divisions:

- Strategy Division: Strategy plans team, operational assessment team, and in some variations a target integration team.
- Combat Plans Division: Master Air Attack Team (MAAT) and Air Tasking Order (ATO)/Airspace Control Order (ACO) production team.
- Combat Operations Division: Offensive operations team and defensive operations team.
- Air Mobility Division: Air Mobility Control Team (AMCT), Airlift Control Team (ALCT), Aerial Refueling Control Team (ARCT), Air Mobility Element (AME), and Aeromedical Evacuation Control Team (AECT) (AFDD 2, 2000).

“The Air Mobility Division plans, coordinates, tasks, and executes the air mobility mission. The AMD is located in the JAOC and is directed by the DIRMOBFOR” (AFDD 2, 2000). This is the central hub for all airlift operations within the theater. Direction from theater commanders, JFC and JFACC, flows through the AMD to all theater airlift units by ATO or direct communications. The AMD provides control to aircraft OPCON or TACON to the JFC. In, or near, the AMD is the AME, a deployed asset of USTRANSCOM, who works with TACC to support the integration of inter- and intratheater air mobility operations (AFDD 2, 2000).

The mission of the AMD is to:

- Integrate and direct the execution of intra- and intertheater air mobility forces in the AOR/JOA and in support of the JFC's requirements and objectives.
- Maintain the flow of intra- and intertheater air mobility assets in support of JFC objectives.
- Coordinate air mobility support for mobility requirements identified and validated by the JFC requirements and movement authority as appropriate.
- Coordinate aerial refueling planning, tasking, and scheduling to support inter- and intratheater air operations.
- Participate in the aerospace assessment, planning, and execution process and coordinate with the JAOC director to ensure the air mobility mission is incorporated in the ATO.
- Identify Intelligence, Surveillance, and Reconnaissance (ISR) requirements in support of the air mobility mission.
- Ensure intratheater air mobility missions are visible in the AMC standard C2 system and reflected in the ATO/ACO (AFDD 2, 2000).

The AMD receives orders from the AMD Director (typically an 0-4 or 0-5), who reports to the AOC Director (typically an 0-5 or 0-6) who, in turn, reports to the JFACC. However, the DIRMOBFOR (Typically an 0-6 or 0-7) also provides direction to the AMD. As a senior officer, the DIRMOBFOR exists to give airlift extra visibility to assure mission success (Salley, 2002). However, the dual airlift chain of command can lead to confusion.

Director of Mobility Forces

The DIRMOBFOR evolved from the Commander of Airlift Forces (COMALF) position, which exercised command authority of airlift forces. The title changed from

commander to director to prevent dual command confusion between the COMALF and the JFACC. Yet the position remained to keep a senior officer present in the JOAC to assure tanker and airlift missions were properly planned and executed. Now, rather than exercise command authority, the DIRMOBFOR is a mobility liaison to combined, joint, and Air Force forces. They can be appointed by the JFC or by TRANSCOM and are generally OPCON to the JFACC (AFDD 2, 2000). Like the TALO, governing regulations for the DIRMOBFOR are written by AMC/DOOM, the office of mobile command and control (AMCI 10-202, 1998).

The DIRMOBFOR is “the COMAFFOR’s or JFACC’s designated coordinating authority for air mobility with all commanders and agencies both internal and external to the JTF” (AFDD 2, 2000). DIRMOBFOR’s specific authorities and responsibilities include:

- Direct the integration of intertheater air mobility support provided by USTRANSCOM-assigned mobility forces.
- Coordinated the tasking of USTRANSCOM intertheater air mobility forces (air and ground) attached (TACON) to the JFC.
- Direct the tasking of intratheater air mobility forces (air and ground) attached (either OPCON or TACON) to the JFC.
- Coordinate with the AOC director to ensure all air mobility operations supporting the JFC are fully integrated with the ATO cycle and deconflicted with all other air operations.
- Coordinate with the Tanker Airlift Control Center (TACC), through the AMD, all intertheater air mobility missions to ensure the most effective use of these resources in accomplishing the JFC, theater and USTRANSCOM missions. (AFDD 2, 2000)

As noted earlier, DIRMOBFOR do not exercise command authority. Yet, the “COMAFFOR/JFACC exercises intratheater air mobility command and control through the Director, Air Mobility Forces (DIRMOBFOR) and Air Mobility Division (AMD) of the AOC” (AFDD 2-8, 2001). By doctrine, this places unity of command on the COMAFFOR/JFACC. In operations, this requires that the JFACC, DIRMOBFOR, and the AMD Director clearly delineate roles and responsibilities or face C2 difficulties similar to those that existed in the days of the COMALF.

III. Methodology

Chapter I gave the introduction and a brief outline and objectives of this paper. Chapter II discussed organizations in general and within the AF. Chapter IIA covered major AF units involved with the TALO operational mission. This chapter explores how TALO accomplish their mission. Given that approximately 80% of the deployed TALO time and work is dedicated to coordinate employment resupply airlift (airdrop and airland) missions (Ford, 1996), the first part of the chapter details the airlift request procedure. The second part of the chapter is dedicated to explaining the different contacts TALO maintain to perform their mission.

The focus here is how, and with whom, TALO work. From Chapter II we see the classical and AF view to building organizations with the right person in the right place. Some of the important concepts drawn were the importance of unity of command, technical efficiency, and span of control (difference of function, time, and space). Also, from Chapter I, is the importance of having the correct chain of command to ensure

TALO accomplish their mission correctly. This chapter starts to tie the TALO mission to the technical experts who conduct similar, if not the same, missions.

Airlift Request Procedures within the Army

A primary role of deployed TALO is to assist their supported Army unit in making airlift requests. Stated formally, this is to “assist the Army unit developing, submitting, and coordinating, planned, immediate and emergency airlift requests” and “coordinate immediate and emergency airlift missions with the deployed airlift coordination cell (ALCC) via the airlift advance notification/coordination net (AANCN)” (AMCI 13-101, 1996). (As mentioned in Chapter II, the ALCC is now known as the AMD.)

The Army moves materials with their own organic capabilities within the corps, division etcetera when able. If this is not possible, then prior to making an airlift request, they need to consider “(1) operational necessity, versus convenience, (2) availability and suitability of alternate surface transportation modes, (3) Defense Transportation Movement priority system, and (4) the JFC’s apportionment” (JP 3-17, 1995). This assumes that in a theater of operations, airlift will be at a premium. Once made, airlift requests are handled through the G4 and S4 channels or the G3 and S3 channels, depending on the type of request.

Three types of airlift request exist: planned, immediate, and emergency.

Planned airlift includes airlift requirements that are projected in advance. They can include regularly scheduled channel missions or one-time Special Assignment Airlift Missions (SAAM). Either way, these types of requests fall within the normal ATO

planning cycle and are handled as planned requests through the normal logistics channels (JP 3-17, 1995).

Immediate airlift includes airlift requirements that are identified too late for the normal ATO tasking cycle. These requests are made in the event of “urgent” employment, sustainment, or extraction requirements. These requests are normally transmitted by the TALO directly to the JAOC. This gives the AMD advance warning while the formal request is staffed expeditiously through the logistic channels (JP 3-17, 1995).

Emergency airlift is a special case of immediate airlift. It involves “pressing tactical requirements, such as the evacuation of wounded or the immediate resupply of units engaged in combat.” These requests are handled the same as immediate requests with a few exceptions. All actions (requests, approvals, and validations) may be accomplished verbally and backed up afterwards with proper documentation. Also, the JAOC director may divert airlift from planned missions to accomplish emergency airlift prior to receiving verbal tasking from the JMC (JP 3-17, 1995).

Each service has established separate procedures for requesting and validating airlift requests. The Army establishes their procedures in Field Manual (FM) 55-10: Movement Control and FM 10-500-1: Airdrop Request Procedures. An outline of the movement control channels an airlift request takes in the Army is given in Figure 2. As an aside, this Army graphic is an excellent depiction of the Army mechanisms of requesting Air Force airlift, but it implies that Air Force TALO work only in a TALO chain of command. By doctrine and in practice, there is no TALO hierarchy. TALO

will work directly with all other TALO and work directly with the AF C2 agency, the AMD, through the AANCN (AMCI 13-101, 1996).

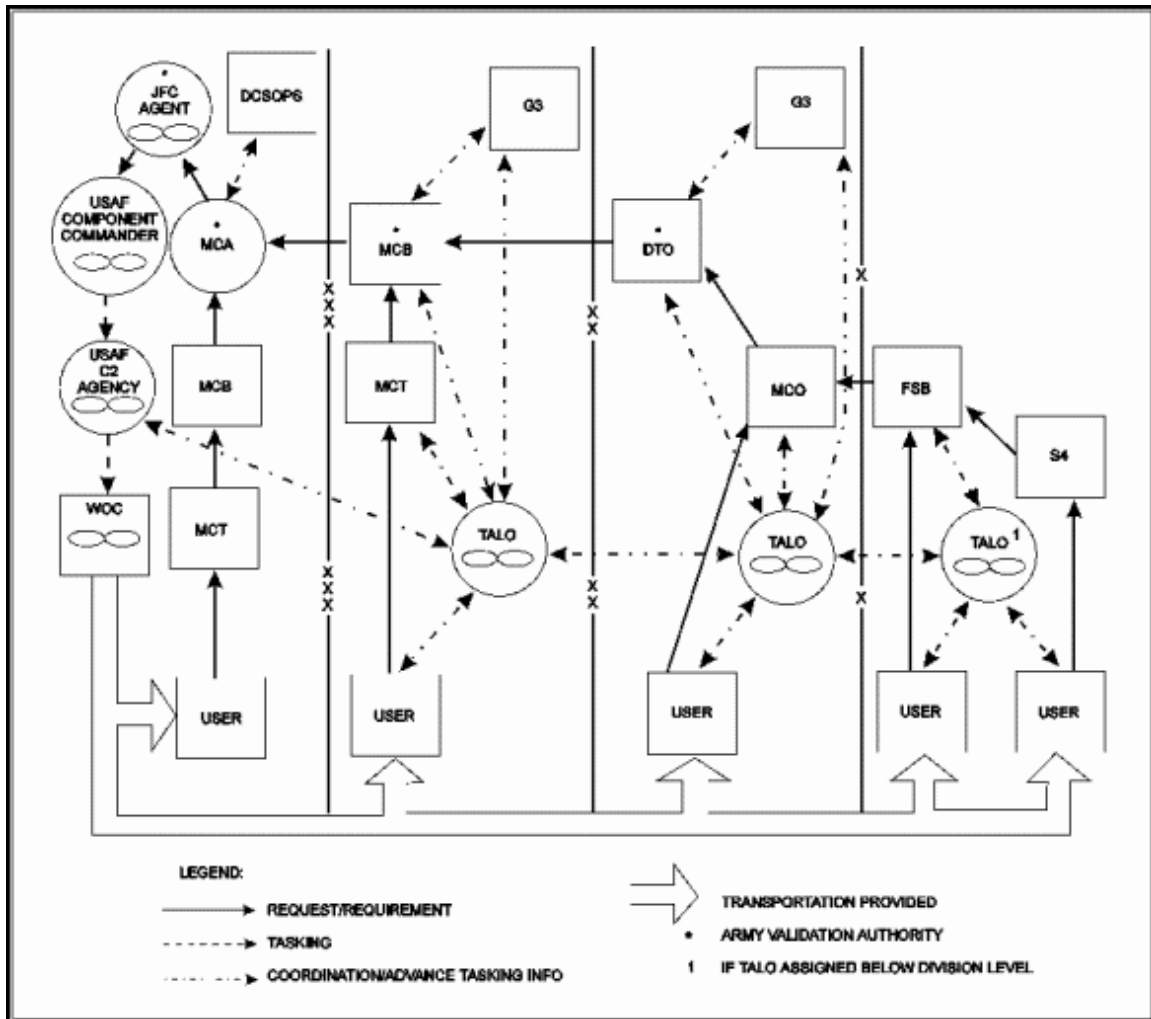


Figure 2. Planned Airlift Request (FM 55-10, 1999)

Within Army units, motor transport is considered the primary mode to support forces (FM 55-10: 1999). Yet airlift, both organic (Army helicopter airlift) and AF is recognized as a flexible and essential mode of transportation, a mode that can traverse great distances at great speed without regard to terrain.

Request for AF airlift support can come from any level Army unit. The request is submitted using a DD Form 1974 (Appendix B), Joint Tactical Airlift Request. These can originate as a specific request for airlift, a general request for transportation, or as a request for supplies (which higher levels of command determine can best be satisfied by airlift). AF airlift experts within the request process determine how the request can best be satisfied with airland or airdrop assets.

Battalions may initiate the request for transportation and process it through the S4, logistics officer. The S4 works through the Forward Support Battalion (FSB) to deliver the request for transportation to the Movement Control Office (MCO). If assigned at this level, a TALO will advise and assist in this process.

The Division MCO receives transportation requests from subordinate units and reviews them to determine the most effective mode. If the MCO decides that AF airlift is the most effective method, the MCO coordinates with the requestor and forwards the request to the Division Transportation Officer (DTO) as an AF airlift request. It is typically at this level that a DD Form 1974 is initiated. The DTO coordinates each request with the TALO, validates each request, and forwards them to the Corps Movement Control Battalion (MCB) (FM 55-10: 1999). As a note, the DTO and MCO are typically located within the Division Support Command (DISCOM) Command Post (CP). As such, Army doctrine sets the Division TALO within the DISCOM CP to coordinate with these offices (FM 71-100, 1996). There will be more discussion later as to where TALO can best accomplish their mission.

The Corps MCB receives transportation and airlift requests from Corps units or validated airlift requests from DTO and either validates the request or selects an alternate

mode. If the request is validated by the MCB, it forwards the request to the Theater Army Movement Control Agency (TAMCA) (FM 55-10: 1999). Army doctrine places the Corps TALO in the Corps Rear CP (FM 100-15, 1996). However, the MCB is a function within the Corps Support Command (COSCOM) making TALO operation within the COSCOM CP a viable option.

In Echelons Above Corps (EAC), the TAMCA receives transportation and airlift requests from units located in the communication zone (COMMZ) or validated airlift requests from Corps MCB. The requests are either validated or an alternate mode is selected. If the request is validated by the TAMCA, it is forwarded to the theater combatant command agent located in the Joint Movement Center (JMC). The agent validates the request for the theater combatant commander and passes the request as a tasking to the AF agent (FM 100-15, 1996). The tasking then proceeds to the AMD within the AOC. It is within the AMD where the AF airlift expertise exists to determine how the airlift mission is to be executed, to include airframes, tactics (airland or airdrop) and a host of other options. Once planned, the mission is sent to operational units for execution.

Airlift Liaisons

The mission of deployed TALO is working airlift issues directly with the supported Army unit. Outside of the Army, TALO spend time with AF units (or the AF portion of joint units) gathering airlift information or coordinating airlift events. Essentially, outside of their supported unit, TALO seek units that have airlift information or expertise essential to the support of the aligned TALO unit. It is this similarity in

function between TALO and their contacts (and technical expertise of these contacts) that allow TALO to better accomplish their mission. Similarity in function and technical efficiency are also the same qualities mentioned in section II as essential elements for a director or commander.

This section of the paper integrates the organizations discussed in Chapter IIA with the TALO mission, also discussed Chapter IIA and in “Airlift request procedures within the Army.” It highlights with whom TALO interact regularly to accomplish their mission. This information comes from doctrine, regulations, and qualitative research from operational TALO. Particular attention is paid to unity of command, technical efficiency, and span of control (difference of function, time, and space) as discussed in Chapter II.

TALO and the Army

TALO embody the AMC mission of airlift. As such, all contacts they establish center on this mission. It was noted earlier that TALO could be stationed in the Rear CP, working with the G4 plans and other agencies, or the DISCOM (COSCOM), working with the DTO and MCO. Another location frequented by TALO is the Tactical Operations Center (TOC). The TOC provides central command for Army field operations and is the primary location where the TALO will coordinate DZ operations. Remember that the TALO is often a one-person deep position and these CP are not necessarily collocated. So TALO, by necessity, travel frequently and spend considerable time on the phone or AANCN.

Time spent between these CP and other locations depend on the type unit the TALO supports. Army units such as armor, mechanized infantry, or heavy cavalry, are not highly dependent on DZ operations. A TALO for any of these units will not often work at the TOC. Conversely, Army units such as light infantry, airborne, and air assault rely heavily on AF airlift to conduct operations and may require the TALO to be in the TOC more frequently. However, these units train DZ Support Team personnel for this mission and frequently receive support from Special Tactics Teams (STT), special operation teams trained to provide air traffic control for DZ and assault zone operations.

An interesting note regarding the TALO and DZ operations is that there have been no contingencies since Vietnam where a TALO was required to run a DZ. Ground combat for Grenada, Panama, and Operation DESERT STORM lasted only a few days each so the need for airdrop did not materialize (Laiuppa, 2002). At the time of this writing, For Operation ENDURING FREEDOM, the 101st Airborne Division and the 10th Mountain Division have not required airdrop support. Numerous uncontrolled humanitarian airdrops occurred, but these were not for Army operations. TALO for these units spent their time coordinating deployment and supply issues with TALCE and other units, and working general airlift issues (Self, 2002). Recent experience shows that TALO, even for light units, spend little time in the TOC. However, this does not diminish the need for the TALO to be trained and knowledgeable on DZ operations as the demand for airdrops will likely surface in a protracted conflict.

Regarding Army C2 of TALO, the two are obviously collocated and elements of the G-3 and G-4 are interested in AF airlift. However, TALO work with Army units

because they need assistance understanding AF airlift. Since Army units do not understand AF airlift, hence the need for a TALO, there is a lack technical efficiency.

As an additional note, TALO assist in processing of airlift requests. Anecdotal evidence suggests that if TALO did work for the Army, they would become a cog in the Army machine and become so burdened filling out airlift requests that they would no longer be able to do their primary job (Elliot, 2002; Laiuppa, 2002). Finally, TALO deploy to represent the AMD, the DIRMBOFOR, and conduct an AMC type mission. If deployed TALO reported to the Army, yet still answered to the AF, they would be in even greater conflict with the principle of unity of command than they are now. Lack of technical efficiency regarding airlift and the difficulties with unity of command would hinder the ability of the Army to provide TALO C2.

TALO and the TACP

The current chain of command for deployed operations places the TALO under TACP OPCON. This results in the TACP being the principal AF liaison element aligned with Army maneuver units as well as provides a consolidated point of support for all AF units in the field. This is advantageous in that the Army does not readily recognize that the AF is divided into specialties in airlift and specialties in CAS. Army personnel will just as readily ask an ALO an airlift question as they will ask a TALO an airlift questions (Turley, 2002). TALO, as a member of the TACP, give ALO more ready access to the TALO and those airlift answers (and gives TALO more ready access to the ALO and CAS answers).

Furthermore, providing airlift liaison to the Army appears to be similar in function to providing air combat liaison to the Army. Both work within the Army structure and are special staff members to the supported commander. Depending on the unit mission emphasis, the TACP and TALO may, on occasion, work in the same CP. This can provide advantages including possible immediate top cover. Also, the TACP does provide physical TALO support in the form of communications, transportation, weapons, etc. (MOA, 1994).

However, a number of disadvantages arise when TALO are in the TACP C2. To start is a difference in technical efficiency; further, placing TALO out of an airlift C2 structure denies them the advantage of mentoring from senior airlifters. As noted, TALO can come from a background of limited airlift training and experience to an area where they are often the sole air mobility representatives to the Army. As a member of the TACP, TALO do not strengthen their ability to support Army in matters of airlift. The missions of the TACP and TALO each require a field expert to advise and assist in planning and executing particular joint operations. Neither is capable or qualified to perform the mission of the other.

The TALO/TACP relation also brings out a conflict in the AF principle of unity of command. As the AMC liaison to the Army, TALO represent the DIRMObFOR and AMD. However, TALO are OPCON to a fighter support based unit, the TACP. The TALO cannot properly represent the AMD and DIRMObFOR while under control of the TACP. The current C2 structure leaves TALO vulnerable to having two bosses.

With regard to difference in space, TACP are located almost exclusively in the TOC where TALO tend to locate in the Rear CP or DISCOM (COSCOM) with some time in the TOC. During operations there is often little contact between the two entities.

TACP OPCON of TALO can create an additional bureaucracy level. Army commanders need unfettered access to their airlift experts. Numerous anecdotes relate instances of the Senior ALO blocking TALO access to senior Army officers. In one instance, a Senior ALO reasoned that, as the single AF point of contact to the division, he needed to be fully briefed on all AF events involving the supported unit before the TALO was allowed to contact any senior Army officer. As noted, TALO are not often collocated with the TACP so this can severely hinder their ability to perform duties that require immediate action. In another instance a Corps TALO, deploying his unit in support of Operation ENDURING FREEDOM, was severely chastised by the Senior ALO for directly contacting the Corps CG on a matter regarding the deployment. The Senior ALO, an expert in CAS – not airlift, did not consider the matter sufficiently important to require the attention of the commander. Even after the TALO was proven correct in his actions, saving the Corps from “major” embarrassment, the Senior ALO persisted in blocking the TALO from readily performing his assigned duties (Turley, 2001). The TACP can become a non-airlift layer of bureaucracy; thus hindering mission success.

Related to the additional bureaucracy is the problem summed up by the term *caveamus expertum*, or beware the expert. Senior ALO are experts in the field of CAS. A “trait of the expert is his tendency to assume knowledge and authority in fields in which he has no competence” (Gulick, 1937). It takes years for the pilot of one AMC

weapon system to become an expert in another weapon system and even longer when crossing from ACC to AMC. TALO and ALO exist as different fields of expertise for a reason; neither have competence in the other's field. As a TALO returning from Operation DESERT STORM wrote, "when you OPCON to the senior ALO it muddies the water through their lack of understanding of airlift" (Yost, 1994). In the end, the Army unit may suffer when the command staff seeks airlift answers from the "expert" Senior ALO and receives faulty information.

Another conflict is the potential situation of the TALO outranking the Senior ALO. Generally, both TALO and ALO range in rank from captain to lieutenant colonel. When TALO report to the senior ALO, they often report to a Lt Col TACP commander, but it is not uncommon for the senior ALO to be a major or captain. What happens when the TALO is a Lt Col or Maj? Does the TALO report to the junior ranking ALO? Should the TALO assume the leadership role since he or she is now the senior AF officer present? If the TALO were to take charge, would the ALO conduct all of his business through the TALO? This creates a militarily awkward situation.

TALO and the TACC or AMOCC

Next is the link between TALO and the TACC or AMOCC. "TACC is the tasking and execution agency for AMC missions and requirements" (AFDD 2-6, 1999). That is, TACC controls worldwide AMC intertheater airlift and CONUS AMC intratheater airlift. If equipped with compatible communication equipment (SATCOM, STU III, etc.) deployed TALO will maintain contact, and coordinate, with TACC for airlift involving their supported unit (i.e. unit deployment, redeployment, and direct

delivery). TACC can provide information such as the status of airlift and ITV of unit equipment. Operations other than this (i.e. operations conducted within the JFACC AOR) are not controlled by TACC, but are controlled by the AOC. Therefore, there is little similarity in function between the TACC and TALO.

Much like TACC, AMOCC controls airlift for the Pacific and European theaters of operation. They are the “theater’s single command and control layer for intratheater air mobility operations external to a JTF” (AFDD 2-6, 1999). Like the TACC, the AMOCC has only limited oversight of aerospace operations within the JFACC AOR, as this is the responsibility of the AOC. So like TACC, contact between the AMOCC and the TALO is limited.

Along with a small overlap in mission between TALO and TACC or AMOCC, there is a problem of location between the entities. With TACC in Scott AFB, the USAFE AMOCC at Ramstein AB, and the PACAF AMOCC at Hickam AB, the TACC and AMOCC tend to physically be outside TALO area of operations making C2 even more difficult.

Furthermore, if TALO were OPCON to TACC or AMOCC, how would C2 be handled? Would the TALO not CHOP to the theater much like the TALCE? This would likely create a problem, as the TALO needs to be highly responsive to their supported unit. Therefore, the difference in locations and function and a lack of technical efficiency would hinder the ability of the TACC and AMOCC to provide TALO C2.

TALO and the TALCE

The TALO is essentially a one-man TALCE with some of the tactical qualities of a STT. While in garrison CONUS OL TALO, like TALCE, report to the AMOG and are regulated by HQ AMC DOOM. (At the time of this writing, Airlift Control Squadrons also owned TALCE; however, these are scheduled to reorganize under AMOG control in July 2002) (Boquist, 2002). Both TALCE and TALO are central points of contact for the AMC Affiliation course (AMCI 13-101, 1996) and both are advertised as AF airlift experts. Finally, while deployed, TALO may be in frequent contact with TALCE for matters of unit deployment, sustainment, employment, and redeployment. As a result, the TALCE, in particular the TALCE Commander, can be a valuable TALO resource.

However, the TALCE mission centers on command and control of an airfield where the TALO mission centers on supporting an individual Army unit. The link between the two occurs only when airlift support is directed to the supported unit of the TALO through the supported airfield of the TALCE. Otherwise, TALO and TALCE have little similarity. TALCE do not focused on individual Army units; rather, they work with AMOCC and TACC to support an entire operation by conducting airlift C2 for their particular airfield.

There are a number of other difficulties that arise if the TALCE were designated as the TALO commander. As noted, the TALCE typically remains OPCON to TACC or AMOCC where the TALO represents the AMD Director and the DIRMOBFOR. This would cause problems noted earlier including unity of command. Next, it is possible that no TALCE exists in the theater, that the largest theater TALCE may only be a MST commanded by an enlisted troop, or that the short term nature of the TALCE drives it to

be replaced. Who would the TALO report to in this event? Difficulties in all matters from unity of command, to technical efficiency, to span of control limit the ability of the TALCE to provide effective TALO C2.

TALO and the AMD

Airlift within the JFACC AOR involves the AOC. Normally this implies OPCON or TACON, but in some instances may only involve coordination with TACC or AMOCC. Ultimately, though, the AMD is involved with all airlift operations within the AOR. As a result, TALO will be intensely involved with the AMD regarding any airlift operations for their supported unit.

Also, TALO and the AMD hold a strong link as evident by portions of their mission. Chapter II noted that the AMD is involved with the “execution of intra- and intertheater air mobility forces in the AOR/JOA” where TALO are involved with “matters consisting of intra- and intertheater Air Force airlift for their supported unit.” The difference between these two missions is the scope. The AMD is concerned with all airlift supporting the operations within the AOR, TALO are concerned with all airlift supporting their unit. In the event the operation is a one corps war, the AMD has the same scope as the corps TALO! Another example is the AMD exists to “coordinate air mobility support for mobility requirements identified and validated,” where TALO will “coordinate planned, immediate, and emergency airlift requests.” Again, TALO and the AMD share a similar mission, with the AMD having a greater scope of operations.

With the shared mission and the established C2 structure of the JAOC, the AMD holds high potential as the control authority for TALO. Returning from the Operation

DESERT STORM, Major Yost wrote “what did work effectively during the Gulf War was an airlift chain [of command] that essentially started at the ALCC” (Yost, 1994). Also, by doctrine, TALO represent the AMD director so unity of command is well maintained.

One difficulty does exist in the AMD structure. By doctrine, the AMD is located in the AOC. This places the AMD and the TALO in the same theater of operations, but not collocated. The AMD has an understanding of the TALO situation, but does not have face-to-face communication with TALO. Therefore, technical efficiency, unity of command, and similarity in function are excellent, and difference in space is good with regard to the AMD providing TALO C2.

TALO and the DIRMOBFOR

The final avenue to explore is that of TALO and the DIRMOBFOR. As the DIRMOBFOR provides direction to the AMD and coordinates TRANSCOM intertheater airlift into the AOR, this would appear to be the basis for a strong link between the DIRMOBFOR and TALO. Furthermore, the description of TALO as airlift liaisons to the Army matches well with the DIRMOBFOR description as a mobility liaison to combined, joint, and AF forces. In previous years, the TALO and COMALF, worked closely together with TALO in direct contact with the user and the COMALF providing direction and “top cover” (Laiuppa, 2002). However, discussions with DIRMOBFOR and TALO reveal that the two have had little to no contact with each other during recent operations (Bishop, 2002; Self, 2002; Elliot, 2002).

A few reasons stand out for the recent sparse contact between DIRMObFOR and TALO. First, AF doctrine does little to connect the missions of the two. Even the DIRMObFOR AMCI 10-202, DIRMObFOR policy and procedures, does not mention the TALO. Likewise, the TALO AMCI 13-101, AMC theater airlift liaison officers, only mentions the DIRMObFOR once. The second reason for little contact between the two is distance. Generally, both work in the theater of operations, but DIRMObFOR will be in the AMD and TALO will be with their supported unit. A third possible reason is the level of responsibility. The DIRMObFOR is a senior officer working almost exclusively at the command level where the TALO is an O-3 through O-5 working at the Army division or corps level. In this respect, the relation between the DIRMObFOR and TALO can be likened to the traditional relation between a commander and a line officer.

With regard to the DIRMObFOR providing C2 of the TALO, there is some potential. They both have a shared mission as a liaison of air mobility operations and the DIRMObFOR works with most of the units that TALO work with. Also, along with representing the AMD Director, deployed TALO are considered the representative of the DIRMObFOR so unity of command is maintained.

A disadvantage is that DIRMObFOR are not well established in joint doctrine, and not recognized at all in combined doctrine. They are a liaison to the JFACC that may or may not have command authority. If the JFACC delegates OPCON or TACON of airlift to the DIRMObFOR, that would saturate DIRMObFOR operations, effectively reducing his span of control. Also, as with the AMD, the DIRMObFOR is in the same area of operations as TALO, but is not collocated. Therefore, where unity of command

and technical efficiency between TALO and DIRMOBFOR are excellent, the span of control may be a problem as the DIRMOBFOR exercises C2 over TALO.

IV. Results and Analysis

In Chapter IV the results garnered from the previous chapters are analyzed to determine the best possible command structure for TALO. This chapter is divided into two sections. The first section provides an organigraph of TALO operations; the second section breaks down the C2 potential of different units. The first section relies heavily on information garnered from chapters IIA and III; the second section takes this information and applies it to the development of organizations discussed in Chapter II. First, it is necessary to review Chapter II and how the theater airlift liaison system is integrated.

Chapter II detailed a four-step process, developed by Luther Gulick, on the development of an effective organization. This model is reviewed using information gathered earlier in this study. The four steps are:

- I. First Step: Define the job to be done.
- II. Second Step: Provide a director to see that the objective is realized.
- III. Third Step: Determine the nature and number of individualized and specialized work units into which the job will have to be divided.
- IV. Fourth Step: Establish and perfect the structure of authority between the director and the ultimate work subdivision.

The first step is covered in considerable detail throughout this paper. The job to be done is the mission of the TALO: to provide an air mobility liaison to the Army ensuring more effective airlift operations.

The second step establishes TALO as OPCON to the TACP and their director as the Senior ALO. This relationship is also the focus of step four.

The third step divided the task of air support, and in particular airlift support, to the Army into separate subtasks. These labor units were divided amongst the TALO, TACP, TALCE, TACC, AMOCC, AMD, DIRMOBFOR, and the Army.

In the fourth step, a review TALO C2 in an attempt to improve the effectiveness of theater airlift. Currently, TALO are OPCON to the TACP, report to the senior ALO, and work where directed by the Senior ALO. Like TALO, TACP also support US Army units. However, where TALO are focused on airlift, ALO are focused on CAS. Does a better C2 structure exist for the TALO?

From steps two and four, experts from Gulick to modern AF doctrine advocate a number of qualities a supervisor should possess to make a more effective organizational structure. The qualities advocated are unity of command, technical efficiency, and span of control (to include similar function, time – stable organization, and space – collocated supervisor and subordinate).

TALO Organigraph

This section summarizes the information from Chapters IIA and III to determine with whom the TALO works. This is done through the use of an organigraph. The organigraph is a tool similar to an organizational chart, but rather than showing the

formal reporting chain, the organigraph shows links and hubs emphasizing who actually coordinates with whom. Where a traditional organization chart is a management tool that gives a vague representation of how “things get done,” organigraphs “demonstrate *how* a place works, [by] depicting critical interactions among people, products, and information” (Mintzberg & Van der Heyden, 1999). As an example, Figure 2: Planned Airlift Requests, was an organigraph.

In the organigraph, boxes represent individual entities, circles are coordinating centers (hubs), and lines are interactions between offices. The organigraph for TALO operations is further modified using solid lines to represent mission intensive interaction. Mission intensive interaction relates directly to the TALO core mission, requires regular contact, and is frequent in nature. Examples of this include coordinating airlift supply and deployment operations. Non-mission intensive interaction is represented by a dashed line and represents situations where the TALO maintains formal contact, but the contact is not related directly to the TALO core mission, not conducted regularly, and is not conducted frequently. Such relations could represent support relations (such as the TACP supporting the TALO) or infrequent contacts (such as between the DIRMBOFOR and TALO).

The organigraph for air operations in an Army Division and an Army Corps are given in Figures 3 and 4 respectively. Again note that information derived for these figures comes from the above noted doctrine, regulations, and qualitative study of TALO operations.

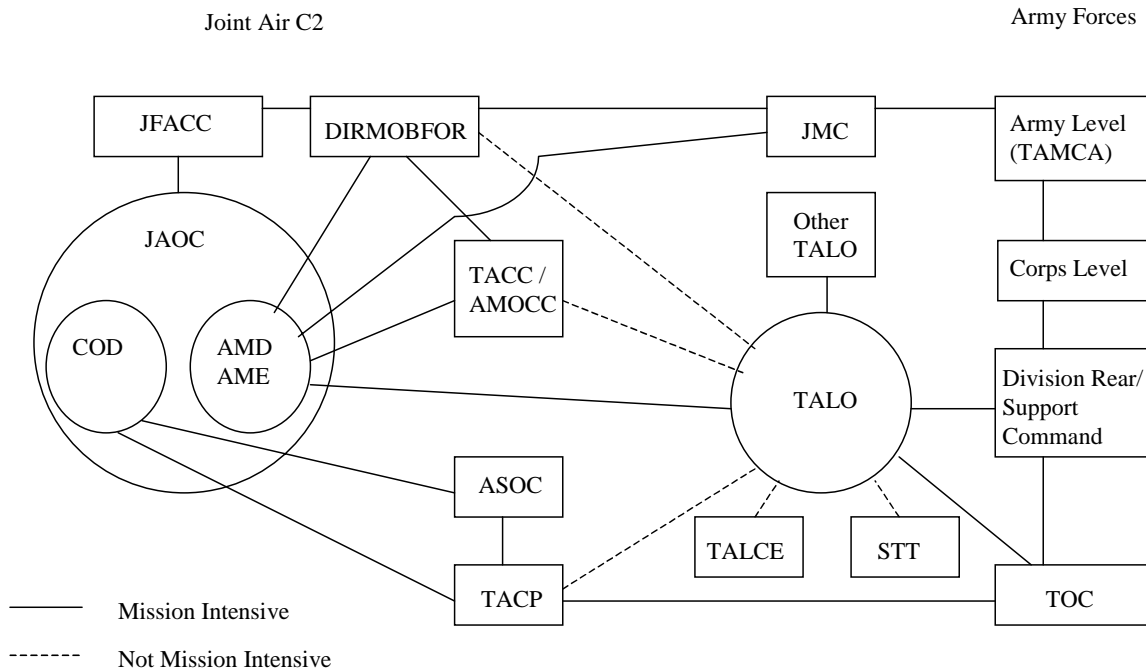


Figure 3. Air Operations for an Army Division

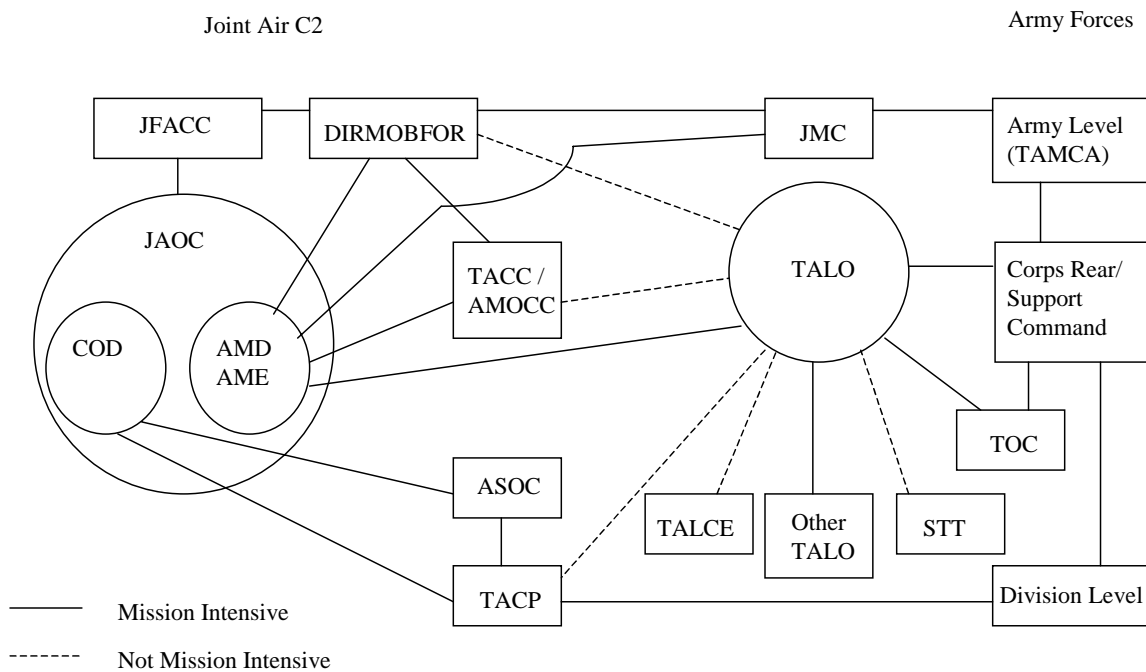


Figure 4. Air Operations for an Army Corps

Figures 3 and 4 show that that there is little difference in the pattern of contact between corps level TALO and division level TALO. These figures highlight the primary contacts the deployed TALO must maintain. These are the many individual offices within their supported Army unit, the AMD, and other TALO. TACC or AMOCC was excluded as mission intensive since TALO need specific mission information from TACC or AMOCC, but under normal situations can receive much of the same information from the AMD. The TACP was excluded as mission intensive since TALO receive specific physical support from the TACP, but other than a MOA, there is little reason why the TACP should deliver this support. These offices are important to the conduct of TALO operations, but do not hold the daily significance of the supported Army unit, the AMD, and other TALO.

Command and Control

The organizations that were considered able to provide C2 of the TALO (TACP, Army, TACC or AMOCC, AMD, and DIRMBOFOR) and the qualities of an effective organization (Unity of Command, Technical Efficiency, and Span of Control) are summarized in Table 1: TALO C2 Summary. In this table, the doctrine, regulations, and interviews were used to create a Likert scale rating indicating how well the TALO mission would incorporate with the discussed organizations. Here, a higher number in a column and row indicates a better fit for the TALO within the given organization than a lower number in the same column and row.

Table 1: TALO C2 Summary

\ C2 Structure Organization Quality \	TACP	Army	TACC/ AMOC	TALCE	AMD Director	DIRMOBFOR
Unity of Command	2	1	2	2	3	3
Technical Efficiency (Unit Homogeneity)	2	1	2	2	3	2.5
Span of Control (Function Difference)	2	1	1	2.5	2.5	3/2 *
Span of Control (Time Difference)	3	2	2	1.5	3	2
Span of Control (Space Difference)	2.5	3	1	2	2	2

* If airlift OPCON/TACON delegated to the DIRMOBFOR, span of control diminishes

- 1 – Low degree of fit
- 2 – Medium degree of fit
- 3 – High degree of fit

The number for Table 1 were derived as follows:

Unity of Command

1. Answers to supervisors of different services
2. Answers to supervisors of different commands
3. Answers to a single supervisor

Technical Efficiency (Unit Homogeneity)

1. Very little mission correlation between subordinate and supervisor
2. Moderate mission correlation between subordinate and supervisor
3. High mission correlation between subordinate and supervisor

Span of Control (Difference in Function – Subordinate/Subordinate)

1. Numerous subordinates conducting vastly different missions
2. Subordinate conducting varying, but related missions
3. Few subordinates conducting highly related missions

Span of Control (Difference in Time – Stable Organization)

1. Organization is very new, very dynamic, or not well established in doctrine
2. Organization undergoing change, but generally established and defined
3. Stable, well established and defined organization

Span of Control (Difference in Space – Collocation)

1. Subordinate and supervisor not in the same theater of operations
2. Subordinate and supervisor in the same theater, but not the same CP
3. Subordinate and supervisor located on the same CP (fort, post etc.)

To determine if the TALO should change their organizational structure, a comparison of column 1, TACP, is made to all other columns. To determine the organization that should provide the best C2 structure, a comparison of each column is made. It is immediately obvious that the Army, TACC/AMOCC, or TALCE would likely not provide better TALO C2 than the TACP and that the AMD and DIRMOBFOR both have a potential to provide better TALO C2.

Both the AMD and the DIRMOBFOR have a unity of command and a technical efficiency advantage over the TACP. Also, the AMD and DIRMOBFOR appear to be on near par with the TACP regarding span of control. Additionally, the DIRMOBFOR has a functional advantage over the TACP. This occurs when OPCODE/TACON of airlift forces is not delegated to the DIRMOBFOR. In this situation, the only forces the DIRMOBFOR would have OPCODE over would be the TALO, which would create a highly homogenous DIRMOBFOR force. On the other hand, since the AMD is a more stable homogenous unit than the DIRMOBFOR, the AMD would appear to be the best possible provider of TALO C2.

The one advantage the TACP holds is in the proximity it has with the TALO. The TACP is more capable than any other agency (other than the Army) to provide immediate, face-to-face C2 of the TALO. Also, with collocation, lies the potential advantage of “top cover” for the TALO.

To summarize Table 1, the AMD has the potential to provide the best possible C2 organizational structure for the TALO of all the units considered.

V. Conclusions

“Airlift experts run airlifts better than combat experts” (Tunner, 1964)

This study started with the objective to highlight the mission of airlift liaison to the Army and focus on the current state of affairs of the TALO regarding air mobility liaison C2. It 1) reviewed organizational theory and AF organizational doctrine, 2) defined elements that liaise with the Army regarding airlift operations, and 3) emphasized the TALO need to be incorporated in an airlift-centered C2 structure. Finally, this paper shed light on the absence of literature and doctrine on TALO – and the services they provide – and tried to improve such operations by exploring this valuable commodity and the TALO C2 structure.

“The objective of aerospace C2 is to use available forces, at the right place and time, to optimize the attributes of global vigilance, reach, and power – thereby ensuring decision dominance over adversaries” (AFDD 2-8, 2001). To better meet this objective, requires that the TALO be placed in the best possible C2 structure. From the research conducted in this paper, to optimize theater airlift liaison, would require that the TALO be removed from the TACP and reorganized as OPCON to the AMD Director. Though compelling, the evidence is not fully conclusive.

Where TACP is more immediately available to the TALO, the AMD is more technically efficient, functionally similar, and would provide a more unified command to the TALO. With regard to doctrine, changing OPCON of the TALO from the TACP to AMD is soundly based. It follows the principle of unity of command, as the TALO would no longer be required to answer to the Senior ALO, the AMD Director, and the

DIRMOBFOR. Changing OPCON improves technical efficiency by placing the TALO in a structure that has the sole mission of airlift operations. Finally, an AMD/TALO structure improves functional unity by placing the TALO in a structure where all of his or her peers and supervisor are airlift experts.

There are two particular difficulties that would have to be addressed for such a move to be made. First, TALO are provided support by the TACP according to a joint MOA. Is it necessary for TALO to be OPCON to the TACP for the TACP to provide physical support to the TALO? If this were so, the responsibility for this support (vehicle, communication equipment, weapon, etc.) would have to shift to AMC and/or the Army. Second, while CONUS OL TALO report to AMOG while in garrison, overseas TALO report to the TACP while in garrison. Either consideration should be given to have overseas TALO report to overseas AMOG while in garrison or an agreement should be reached that overseas TALO CHOP to the AMD while deployed for operations. Evidence from this paper suggests that for the same reason deployed TALO should report to the AMD, overseas TALO in garrison should report to overseas AMOG; however, further research needs to be conducted before this recommendation is adopted.

In the end, this paper finds that by moving the TALO out of the TACP, and under OPCON of the AMD Director, the mission of airlift liaison to the Army can better be accomplished.

Appendix A: Glossary

AANCN	Airlift Advanced Notification/Coordination Net
ACC	Air Combat Command
ACL	Allowable Cabin Load
ACO	Airspace Control Order
ACSC	Air Command and Staff College
ADCON	Administrative Control
AECT	Aeromedical Evacuation Control Team
AF	Air Force
AFDD	Air Force Doctrine Document
AFI	Air Force Instruction
AFSC	Air Force Specialty Code
ALCC	Airlift Coordination Cell
ALCE	Airlift Control Element
ALCT	Airlift Control Team
ALO	Air Liaison Officer
ALOQC	Air Liaison Officers Qualifying Course
AMC	Air Mobility Command
AMCT	Air Mobility Control Team
AMD	Air Mobility Division
AME	Air Mobility Element
AMOCC	Air Mobility Operations Control Center
AMOG	Air Mobility Operations Group
AOC	Air Operation Center
AOR	Area Of Responsibility
ARCT	Air Refueling Control Team
ASOC	Air Support Operations Center
ATO	Air Tasking Order
AZ	Assault Zone
A2C2	Army Airspace Command and Control
CAOC	Combined Air Operations Center
CAS	Close Air Support
CG	Commanding General
CHOP	Change of Operational Control
COCOM	Combatant Command
COD	Combat Operations Division
CofS	Chief of Staff
COMAFFOR	Commander of Air Force Forces
COMMZ	Communication Zone
CONUS	Contiguous United States
COSCOM	Corps Support Command
CP	Command Post
C2	Command and Control
DD	Department of Defense
Div	Division

DIRMOBFOR	Director of Mobility Forces
DISCOM	Division Support Command
D-Rear	Division Rear
DTO	Division Transportation Officer
DZ	Drop Zone
EAC	Echelons Above Corps
ETAC	Enlisted Terminal Attack Controller
FM	Field Manual
FSB	Forward Support Battalion
FSE	Fire Support Element
G-3	Operations
G-4	Logistics
HQ	Headquarters
ITV	In Transit Visibility
JAOC	Joint Air Operations Center
JFACC	Joint Forces Air Component Commander
JFC	Joint Force Commander
JFCC	Joint Firepower Control Course
JMC	Joint Movement Center
JOA	Joint Operations Area
LNO	Liaison Officer
MAAT	Master Air Attack Team
MAC	Military Airlift Command
MAJCOM	Major Command
MOA	Memorandum of Agreement
MCB	Movement Control Battalion
MCO	Movement Control Office
MCT	Movement Control Team
NCA	National Command Authority
OL	Operating Location
OPCON	Operational Control
SAAM	Special Assignment Airlift Mission
STT	Special Tactics Team
TAC	Tactical Air Command
TACC	Theater Airlift Control Center
TACON	Tactical Control
TACP	Tactical Air Control Party
TACS	Theater Air Control System
TALCE	Tanker Airlift Control Element
TALO	Theater Airlift Liaison Officer
TAMCA	Theater Army Movement Control Agency
TCTC	TALO Contingency Training Course
TOC	Tactical Operations Center
USTRANSCOM	United States Transportation Command
UTC	Unit Type Code

Appendix B: DD Form 1974

JOINT TACTICAL AIRLIFT REQUEST				See JCS Pub 12, Vol II for instructions for preparation.	
1. REQUEST					
1. UNIT CALLED (IDENTIFIER)		THIS IS MY IDENTIFIER		REQUEST NUMBER	
				SENT TIME _____ BY _____	
2. I HAVE		<input type="checkbox"/> 1. AN IMMEDIATE <input type="checkbox"/> 2. GROUND ALERT <input type="checkbox"/> 3. FLARE		<input type="checkbox"/> 4. PREPLANNED <input type="checkbox"/> 5. AIRLAND <input type="checkbox"/> 6. SPECIAL	
<input type="checkbox"/> 1. AIR ALERT <input type="checkbox"/> 2. PERS DROP				MISSION <input type="checkbox"/> 3. EQUIP DROP <input type="checkbox"/> 4. AIR EVAC	
3. ONLOAD AIR FIELD					
<input type="checkbox"/> A. NAME _____		<input type="checkbox"/> C. CONTACT _____		<input type="checkbox"/> D. DTG _____	
<input type="checkbox"/> B. COORD _____					
4. OFFLOAD AIRFIELD/DROP ZONE/EXTRACTION ZONE					
<input type="checkbox"/> A. NAME _____					
<input type="checkbox"/> B. COORD _____					
<input type="checkbox"/> C. CONTACT _____					
<input type="checkbox"/> D. DTG _____					
5. NUMBER OF PASSENGERS					
<input type="checkbox"/> A. COMBAT TROOPS _____					
<input type="checkbox"/> B. PARATROOPS _____					
<input type="checkbox"/> C. AIR EVACS _____					
<input type="checkbox"/> D. AMBULATORY _____					
<input type="checkbox"/> E. LITTER _____					
6. GENERAL CARGO					
<input type="checkbox"/> A. TYPE (SPECIFY POL, RATIONS ETC.) _____					
<input type="checkbox"/> C. WEIGHT _____					
<input type="checkbox"/> D. LARGEST SINGLE ITEM _____					
7. NUMBER OF VEHICLES					
<input type="checkbox"/> A. 1/4 TON TRK _____		<input type="checkbox"/> B. 1-1/4 TON TRK _____		<input type="checkbox"/> C. 2-1/2 TON TRK _____	
<input type="checkbox"/> D. 1/4 TON TRL _____		<input type="checkbox"/> E. 3/4 TON TRL _____		<input type="checkbox"/> F. 1-1/2 TON TRL _____	
<input type="checkbox"/> G. APC _____		<input type="checkbox"/> H. 105 HOW _____		<input type="checkbox"/> I. 165 HOW _____	
<input type="checkbox"/> J. OTHER _____					
8. SPECIAL HANDLING CARGO					
<input type="checkbox"/> A. TYPE _____		<input type="checkbox"/> B. TOTAL PIECES _____		<input type="checkbox"/> C. WEIGHT _____	
<input type="checkbox"/> D. CLASS _____		<input type="checkbox"/> E. NOMEN _____		<input type="checkbox"/> F. SINGLE DAGGER REQ _____	
<input type="checkbox"/> G. CUBE _____					
9. TOTAL WEIGHT (TOTAL ITEMS G - I)					
<input type="checkbox"/> A. WEIGHT _____					
10. RECOMMENDED					
<input type="checkbox"/> A. (NUMBER ACFT) _____		<input type="checkbox"/> B. (TYPE ACFT) _____		<input type="checkbox"/> C. CDS _____	
		<input type="checkbox"/> D. LAPES _____		<input type="checkbox"/> E. GPES _____	
		<input type="checkbox"/> F. CCT _____		<input type="checkbox"/> G. OTHER (Specify) _____	
11. REMARKS				ACKNOWLEDGED	
				<input type="checkbox"/> BDE/REGT	
				<input type="checkbox"/> DIVISION	
				<input type="checkbox"/> OTHER	
12. COORDINATION					
NGF		ARTY		AID/G-2/G-3	
				REQUEST <input type="checkbox"/> A. APPROVED <input type="checkbox"/> B. DISAPPROVED (BY) _____	
REASON FOR DISAPPROVAL				RESTRICTIVE FIRE/AIR PLAN	
				<input type="checkbox"/> A. IS NOT <input type="checkbox"/> B. NUMBER _____	
<input type="checkbox"/> C. (FROM TIME) _____		<input type="checkbox"/> D. (TO TIME) _____		<input type="checkbox"/> E. FROM COORDS _____	
<input type="checkbox"/> F. (WIDTH - METERS) _____		<input type="checkbox"/> G. (MAXIMUM/VERTX ACFT) _____		<input type="checkbox"/> H. (TO COORDS) _____	
<input type="checkbox"/> I. (GROUND/FX) _____					
13. AIR MISSION DATA					
13. MISSION NUMBER		14. CALL SIGN		15. NO. AND TYPE ACFT	
16. _____		17. CONT PT - COORD/NAV AID FIX		18. LZ/DZ/EZ COORD	
19. TYPE DELIVERY		20. INITIAL CONTACT		21. CGT/FAI/ASRT	
		<input type="checkbox"/> A. CALL SIGN		<input type="checkbox"/> B. CALL SIGN	
		<input type="checkbox"/> C. FREQUENCY		<input type="checkbox"/> D. FREQUENCY	
				22. NOTIFIED DTG	
				TUOC _____ CRC _____	
				TACP _____ ASRT _____	

DD Form 1974, APR 75

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Vita

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He completed Undergraduate Pilot Training at Reese AFB, Texas in 1989 and was assigned to the 37th Tactical Airlift Squadron, Rhein-Main AB, Germany. Here, he worked as a C-130E pilot and tactics officer. In 1992, he was assigned to fly the MC-130E with the 8th Special Operations Squadron, Hurlburt Field, Florida and work as chief of training, and squadron executive officer. In 1995, he was assigned to the 615th Air Mobility Operations Group Operating Location-O, Fort Riley, Kansas as the 1st Infantry Division (Mechanized) Theater Airlift Liaison Officer. In 1998, he was assigned to the 39th Airlift Squadron, Dyess AFB, Texas as a C-130H instructor pilot. At Dyess, he was also assigned to the 317th Airlift Control Squadron as a Tanker Airlift Control Element Operations Officer and Theater Airlift Liaison Officer; and was assigned to the 317th Airlift Group as Chief of Plans and Programs. In 2001, he was assigned to the Air Mobility Warfare Center, Fort Dix, New Jersey as a student in the Advance Studies of Air Mobility Program.

Maj Barnes was promoted to his current rank on 1 November 1999. He received a Master of Science degree in Secondary Education, Mathematics from Kansas State University in 1997 and completed Air Command and Staff College by correspondence in 2001. His next assignment will be to the Command and General Staff College, Fort Leavenworth, Kansas. He is married and has a son, daughter, and is expecting a third child in October 2002.

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14. ABSTRACT <p>This paper addresses the following questions: First, can substantive standards be created for Theater Airlift Liaison Officers (TALO)? Second, can the command and control (C2) structure be improved so that TALO can better support Army units?</p> <p>These questions are explored through a review of classical organizational theory and Air Force organizational doctrine. This review highlights the importance of unity of command, technical efficiency, and span of control (including difference of function, time, and space) as critical factors in organizational development. Next, Air Force airlift units that liaise with the Army and work with the TALO, such as the Tactical Air Control Party (TACP), Tanker Airlift Control Element (TALCE) Tanker Airlift Control Center (TACC), Air Mobility Operations Control Center (AMOCC), Air Mobility Division (AMD), and Director of Mobility Forces (DIRMOBFOR), are analyzed in relation to their potential to provide TALO C2. This is done through a qualitative review of doctrine, regulations, and past TALO operations.</p> <p>After analysis, the findings conclude that the TACP provides an adequate C2 structure for the TALO, but the AMD Director, and possibly the DIRMOBFOR, would provide a better structure. AMD operational control of TALO would result in better support for the Army.</p>					
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